# IN THE UNITED STATES PATENT AND TRADEMARK OFFICE BOARD OF PATENT APPEALS AND INTERFERENCES

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In re Application of: : Examiner: Ryan A. Reis

Thomas SEBASTIAN

For: FUEL INJECTOR AND METHOD

FOR ITS INSTALLATION

Filed: June 16, 2006

Serial No.: 10/564,212

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Mail Stop Appeal Brief - Patents Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450 I hereby certify that this correspondence is being electronically transmitted to the United States Patent and Trademark Office via the Office electronic filing system on <u>June 29</u>, 2009.

Signature: <u>/Wendy Espinal/</u> Wendy Espinal

Art Unit: 3752

#### **APPEAL BRIEF TRANSMITTAL**

SIR:

Transmitted herewith for filing in the above-identified patent application, please find an Amendment Under 37 C.F.R. § 41.33 and an Appeal Brief pursuant to 37 C.F.R. § 41.37. A two-month period to respond to the Notice of Appeal filed April 27, 2009 expires on June 29, 2009 (since June 27, 2009 was a Saturday).

The \$540 Appeal Brief fee is being paid by credit card.

The Commissioner is also authorized to charge payment of any additional fees or to credit any overpayment to Deposit Account No. 11–0600 of Kenyon & Kenyon LLP.

Respectfully submitted,

Dated: June 29, 2009 By: /Clifford A. Ulrich/

Clifford A. Ulrich, Reg. No. 42,194 for Gerard A. Messina (Reg. No. 35,952)

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## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s) Thomas SEBASTIAN

Serial No. 10/564,212

Filed June 16, 2006

For FUEL INJECTOR AND METHOD FOR ITS

INSTALLATION

Examiner Ryan A. Reis

Art Unit 3752 Confirmation No. 7505

Mail Stop Appeal Brief - Patents Commissioner for Patents P.O. Box 1450

Alexandria, Virginia 22313-1450

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Signature: /Wendy Espinal/ Wendy Espinal

## AMENDMENT UNDER 37 C.F.R. § 41.33

SIR:

This paper is submitted with an "Appeal Brief Pursuant to 37 C.F.R. § 41.37" and cancels, without prejudice, claims 15 and 20.

**Amendments to the Claims** are reflected in the Listing of Claims, which begins on page 2 of this paper.

Remarks begin on page 5 of this paper.

No fee is believed to be required in connection with this communication. However, if any fee is required, please charge to Kenyon & Kenyon LLP Deposit Account, Deposit Account No. 11-0600.

#### **AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions, and listings, of claims in this application:

#### **LISTING OF CLAIMS:**

Claims 1 to 8. (Canceled).

- 9. (Previously Presented) A fuel injector for a fuel-injection system of an internal combustion engine, comprising:
  - a solenoid coil;
  - a tubular support acting as an inner pole of the solenoid coil; and
- a filter element affixed on an outer contour of the tubular support; wherein the outer contour of the tubular support includes grooves; wherein the tubular support includes a shoulder on a discharge side of the grooves; and

wherein the shoulder extends radially outward beyond outer edges of the grooves.

Claim 10. (Canceled).

11. (Previously Presented) The fuel injector as recited in Claim 9, wherein the grooves are provided in the outer contour of the tubular support by one of machine cutting and with the aid of a form steel.

Claim 12. (Canceled).

- 13. (Previously Presented) The fuel injector as recited in Claim 9, wherein the filter element rests against the shoulder.
- 14. (Previously Presented) The fuel injector as recited in Claim 9, further comprising:

an extension sleeve surrounding the exterior of the filter element, wherein the extension sleeve has an inner diameter that is slightly smaller than an outer diameter

of the filter element, whereby a press-fit between the filter element and the tubular support is achieved by the extension sleeve.

Claim 15. (Canceled).

16. (Previously Presented) The fuel injector as recited in Claim 13, further comprising:

an extension sleeve surrounding the exterior of the filter element, wherein the extension sleeve has an inner diameter that is slightly smaller than an outer diameter of the filter element, whereby a press-fit between the filter element and the tubular support is achieved by the extension sleeve.

- 17. (Previously Presented) The fuel injector as recited in Claim 9, wherein the filter element includes a cup-shaped filter made of a cloth material and a glass fiber plastic extrusion coat.
- 18. (Previously Presented) The fuel injector as recited in Claim 13, wherein the filter element includes a cup-shaped filter made of a cloth material and a glass fiber plastic extrusion coat.
- 19. (Previously Presented) The fuel injector as recited in Claim 14, wherein the filter element includes a cup-shaped filter made of a cloth material and a glass fiber plastic extrusion coat.

Claim 20. (Canceled).

- 21. (Previously Presented) The fuel injector as recited in Claim 16, wherein the filter element includes a cup-shaped filter made of a cloth material and a glass fiber plastic extrusion coat.
- 22. (Previously Presented) A method for installing a fuel injector for a fuelinjection system of an internal combustion engine, the fuel injector having a solenoid coil, a tubular support acting as an inner pole of the solenoid coil, and a filter element

affixed on an outer contour of the tubular support, the method comprising the steps of:

producing the filter element, the filter element including a cup—shaped filter having a cloth material;

extrusion-coating the filter element with a glass fiber plastic extrusion coat; providing grooves in the outer contour of the tubular support, the tubular support including a shoulder on a discharge side of the grooves, and the shoulder extending radially outward beyond outer edges of the grooves;

mounting the filter element onto the outer contour of the tubular support;
mounting an extension sleeve on an outer contour of the filter element, an
inner diameter of the extension sleeve being slightly smaller than an outer diameter
of the filter element; and

compressing the glass fiber plastic extrusion coat of the filter element into the grooves in the outer contour of the tubular support, using mounting pressure applied by the extension sleeve.

#### **REMARKS**

This paper cancels, without prejudice, claims 15 and 20. The cancellation of claims 15 and 20 does not affect the scope of any other pending claim in the present application. Accordingly, entry is believed to be appropriate and is respectfully requested.

Respectfully submitted,

Date: June 29, 2009 By: /Clifford A. Ulrich/

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# IN THE UNITED STATES PATENT AND TRADEMARK OFFICE BOARD OF PATENT APPEALS AND INTERFERENCES

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In re Application of: : Examiner: Ryan A. Reis

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on **June 29, 2009**.

Signature: <u>/Wendy Espinal/</u> Wendy Espinal

Art Unit: 3752

## APPEAL BRIEF PURSUANT TO 37 C.F.R. § 41.37

SIR:

On April 27, 2009, Appellant filed a Notice of Appeal from the last decision of the Examiner contained in the Final Office Action dated December 31, 2008 in the above-identified patent application.

In accordance with 37 C.F.R. § 41.37, this brief is submitted in support of the appeal of the final rejections of claims 9, 11, 13, 14, 16 to 19, 21, and 22. For at least the reasons set forth below, the final rejections of claims 9, 11, 13, 14, 16 to 19, 21, and 22 should be reversed.

#### 1. REAL PARTY IN INTEREST

The real party in interest in the present appeal is ROBERT BOSCH GMBH of Stuttgart in the Federal Republic of Germany, which is the assignee of the entire right, title and interest in and to the present application.

#### 2. RELATED APPEALS AND INTERFERENCES

There are no other prior or pending appeals, interferences or judicial proceedings known by the undersigned, or believed by the undersigned to be known to Appellant or the assignee, ROBERT BOSCH GMBH, "which may be related to, directly

affect or be directly affected by or have a bearing on the Board's decision in the pending appeal."

#### 3. STATUS OF CLAIMS

Claims 1 to 8, 10, 12, 15, and 20 have been canceled.

Claims 9, 11, 13, 14, 16 to 19, 21, and 22 are pending.

Claims 9, 13, 14, and 16 stand rejected under 35 U.S.C. § 102(b) as anticipated by U.S. Patent No. 5,335,863 ("DeGrace").

Claims 11, 17 to 19, 21, and 22 stand rejected under 35 U.S.C. § 103(a) as unpatentable over DeGrace.

A copy of the appealed claims, *i.e.*, claims 9, 11, 13, 14, 16 to 19, 21, and 22, is attached hereto in the Claims Appendix.

#### 4. STATUS OF AMENDMENTS

In response to the Final Office Action dated December 31, 2008 ("the Final Office Action"), Appellant filed a "Reply Under 37 C.F.R. § 1.116" ("the Reply") on March 2, 2009. The Reply presented no proposed amendments to the claims. Submitted herewith is an "Amendment Under 37 C.F.R. § 41.33," which proposes to cancel, without prejudice, claims 15 and 20.

#### 5. SUMMARY OF CLAIMED SUBJECT MATTER

The present application contains two independent claims, *i.e.*, claims 9 and 22. Independent claim 9 relates to a fuel injector (1) for a fuel-injection system of an internal combustion engine. *Specification*, page 1, line 2; page 3, lines 13 to 19; Figures 1A and 1B. Claim 9 recites that the fuel injector (1) includes: a solenoid coil (2). *Specification*, page 3, lines 20 to 21; Figures 1A and 1B. Claim 9 recites that the fuel injector (1) includes a tubular support (8) acting as an inner pole of the solenoid coil (2). *Specification*, page 3, lines 24 to 27; Figure 2B. Claim 9 recites that the fuel injector (1) includes a filter element (19) affixed on an outer contour (28) of the tubular support (8). *Specification*, page 6, lines 5 to 13; Figure 2B. Claim 9 recites that the outer contour (28) of the tubular support (8) includes grooves (27). *Specification*, page 6, lines 7 to 11; Figure 2B. Claim 9 recites that the tubular support (8) includes a shoulder (29) on a discharge side of the grooves (27). *Specification*, page 6, lines 13 to 14; Figure 2B. Claim 9 recites that the shoulder (29) extends radially outward beyond outer edges of the grooves (27). Figure 2B.

Independent claim 22 relates to a method for installing a fuel injector (1) for a fuel-injection system of an internal combustion engine. Specification, page 1, lines 2 to 3. Claim 22 recites that the fuel injector (1) has a solenoid coil (2). Specification, page 3, lines 20 to 21; Figures 1A and 1B. Claim 22 recites that the fuel injector (1) includes a tubular support (8) acting as an inner pole of the solenoid coil (2). Specification, page 3, lines 24 to 27; Figure 2B. Claim 22 recites that the fuel injector (1) includes a filter element (19) affixed on an outer contour (28) of the tubular support (8). Specification, page 6, lines 5 to 13; Figure 2B. Claim 22 recites that the method includes producing the filter element (19), the filter element (19) including a cup-shaped filter (21) having a cloth material (24). Specification, page 6, lines 2 to 4. Claim 22 recites that the method includes extrusioncoating the filter element (19) with a glass fiber plastic extrusion coat (25). Specification, page 6, lines 2 to 4; Figure 2A. Claim 22 recites that the method includes providing grooves (27) in the outer contour (28) of the tubular support (8), the tubular support (8) including a shoulder (29) on a discharge side of the grooves (27), and the shoulder (29) extending radially outward beyond outer edges of the grooves (27). Specification, page 6, lines 7 to 11 and 14 to 15; Figure 2B. Claim 22 recites that the method includes mounting the filter element (19) onto the outer contour (28) of the tubular support (8). Specification, page 6, lines 7 to 13; Figure 2B. Claim 22 recites that the method includes mounting an extension sleeve (30) on an outer contour of the filter element (19), an inner diameter of the extension sleeve (30) being slightly smaller than an outer diameter of the filter element (19). Specification, page 6, lines 16 to 25; Figure 2B. Claim 22 recites that the method includes compressing the glass fiber plastic extrusion coat (25) of the filter element (19) into the grooves (27) in the outer contour (28) of the tubular support (8), using mounting pressure applied by the extension sleeve (30). Specification, page 6, lines 16 to 25; Figure 2B.

## 6. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

A. Whether claims 9, 13, 14, and 16 are patentable under 35 U.S.C. § 102(b) over DeGrace.

B. Whether claims 11, 17 to 19, 21, and 22 are patentable under 35 U.S.C. § 103(a) over DeGrace.

#### 7. **ARGUMENTS**

## A. Rejection of Claims 9, 13, 14, and 16 Under 35 U.S.C. § 102(b)

Claims 9, 13, 14, and 16 stand rejected under 35 U.S.C. § 102(b) as anticipated by DeGrace. It is respectfully submitted that DeGrace does not anticipate these claims for at least the following reasons.

To reject a claim as anticipated under 35 U.S.C. § 102, the Office must demonstrate that each and every claim feature is identically described or contained in a single prior art reference. (See Scripps Clinic & Research Foundation v. Genentech, Inc., 18 U.S.P.Q.2d 1001, 1010 (Fed. Cir. 1991)). As explained herein, it is respectfully submitted that the Office Action does not meet this standard, for example, as to all of the features of the claim.

Regarding claim 9, <u>DeGrace does not disclose</u>, or even suggest, that an outer contour of a tubular support includes grooves. As is apparent from column 4, lines 28 to 32 and Fig. 5 of DeGrace, adjusting tube (30'), which the Final Office Action apparently considers to constitute a tubular support, includes *one* external, circumferential groove (58) on its outer contour, and not a plurality of grooves as provided by the above-mentioned feature. In addition, DeGrace does not disclose, or even suggest, that a shoulder, which is part of the tubular support and is situated on a discharge side of the grooves, extends radially outward beyond outer edges of the grooves. On page 2, paragraph 3., the Final Office Action appears to indicate that the adjusting tube (30') shown in Fig. 5 of DeGrace includes a shoulder below groove (58). However, it is clear from inspection of Fig. 5 that the adjusting tube (30') does not have any shoulder below groove (58), but merely assumes the shape of a hollow cylinder. In addition, the Advisory Action dated March 17, 2009 indicates that the so-called "shoulder" is the "portion below 58 including the angled portion extending out to the outermost portion of the tubular support." However, even if a lower surface of groove (58) were considered to constitute a shoulder (which, however, is not conceded by Applicant), the lower surface of the groove (58) is a part of the groove (58) and does not extend radially outward beyond outer edges of the groove (58), but only extends radially to an outer edge of the groove (58). Furthermore, on page 2, paragraph 3., the Final Office Action states that the "shoulder" extends <u>radially outward below groove (58)</u>. However, it is clear from Fig. 5 of DeGrace that below groove (58), the cylindrical wall of adjusting tube (30') only extends in a *longitudinal direction* and a *circumferential direction*, and certainly not in a radial direction beyond outer edges of groove (58). Moreover, the adjusting tube (30) shown in Fig. 2 of DeGrace includes a shoulder on which brass ring (40) rests, but the

adjusting tube (30) does not include a groove. Accordingly, it is respectfully submitted that DeGrace does not anticipate claim 9 for at least these reasons.

As for claims 13, 14, and 16, which ultimately depend from claim 9 and therefore include all of the features of claim 9, it is respectfully submitted that DeGrace does not anticipate these dependent claims for at least the reasons set forth above.

In view of all of the foregoing, it is respectfully submitted that DeGrace does not anticipate claims 9, 13, 14, and 16. Accordingly, reversal of this rejection is respectfully requested.

#### B. Rejection of Claims 11, 17 to 19, 21, and 22 Under 35 U.S.C. § 103(a)

Claims 11, 17 to 19, 21, and 22 stand rejected under 35 U.S.C. § 103(a) as unpatentable over DeGrace. It is respectfully submitted that DeGrace does not render unpatentable claims 11, 17 to 19, 21, and 22 for at least the following reasons.

Regarding claim 22, this claim includes features analogous to claim 9. As set forth above, DeGrace does not disclose, or even suggest, all of the features of claim 9. Accordingly, it is respectfully submitted that DeGrace does not render unpatentable claim 22 for at least these reasons.

Claims 11, 17 to 19, and 21 ultimately depend from claim 9 and therefore include all of the features of claim 9. As set forth above, DeGrace does not disclose, or even suggest, all of the features of claim 9. Accordingly, it is respectfully submitted that DeGrace does not render unpatentable claims 11, 17 to 19, and 21, which ultimately depend from claim 9.

In view of all of the foregoing, it is respectfully submitted that DeGrace does not render unpatentable claims 11, 17 to 19, 21, and 22. Accordingly, reversal of this rejection is respectfully requested.

## 8. <u>CLAIMS APPENDIX</u>

A "Claims Appendix" is attached hereto.

## 9. EVIDENCE APPENDIX

No evidence has been submitted pursuant to 37 C.F.R. §§ 1.130, 1.131 or 1.132. No other evidence has been entered by the Examiner or relied upon by Appellant in the appeal. An "Evidence Appendix" is nevertheless attached hereto.

10. RELATED PROCEEDINGS APPENDIX

As indicated above in Section 2, above, "[t]here are no other prior or pending

appeals, interferences or judicial proceedings known by the undersigned, or believed by the

undersigned to be known to Appellant or the assignee, ROBERT BOSCH GMBH, 'which

may be related to, directly affect or be directly affected by or have a bearing on the Board's

decision in the pending appeal." As such, there are no "decisions rendered by a court or the

Board in any proceeding identified pursuant to [37 C.F.R. § 41.37(c)(1)(ii)]" to be submitted.

A "Related Proceedings Appendix" is nevertheless attached hereto.

11. <u>CONCLUSION</u>

For at least the reasons indicated above, Appellant respectfully submits that

the art of record does not disclose or suggest the subject matter as recited in the claims of the

above-identified application. Accordingly, it is respectfully submitted that the subject matter

as set forth in the claims of the present application is patentable.

In view of all of the foregoing, reversal of all of the rejections set forth in the

Final Office Action is therefore respectfully requested.

Respectfully submitted,

Dated: June 29, 2009

By: /Clifford A. Ulrich/

Clifford A. Ulrich, Reg. No. 42,194 for:

Gerard A. Messina (Reg. No. 35,952)

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#### **CLAIMS APPENDIX**

- 9. A fuel injector for a fuel-injection system of an internal combustion engine, comprising:
  - a solenoid coil;
  - a tubular support acting as an inner pole of the solenoid coil; and
- a filter element affixed on an outer contour of the tubular support; wherein the outer contour of the tubular support includes grooves; wherein the tubular support includes a shoulder on a discharge side of the grooves; and wherein the shoulder extends radially outward beyond outer edges of the grooves.
- 11. The fuel injector as recited in Claim 9, wherein the grooves are provided in the outer contour of the tubular support by one of machine cutting and with the aid of a form steel.
- 13. The fuel injector as recited in Claim 9, wherein the filter element rests against the shoulder.
  - 14. The fuel injector as recited in Claim 9, further comprising:

an extension sleeve surrounding the exterior of the filter element, wherein the extension sleeve has an inner diameter that is slightly smaller than an outer diameter of the filter element, whereby a press-fit between the filter element and the tubular support is achieved by the extension sleeve.

16. The fuel injector as recited in Claim 13, further comprising:

an extension sleeve surrounding the exterior of the filter element, wherein the extension sleeve has an inner diameter that is slightly smaller than an outer diameter of the filter element, whereby a press-fit between the filter element and the tubular support is achieved by the extension sleeve.

17. The fuel injector as recited in Claim 9, wherein the filter element includes a cupshaped filter made of a cloth material and a glass fiber plastic extrusion coat.

- 18. The fuel injector as recited in Claim 13, wherein the filter element includes a cupshaped filter made of a cloth material and a glass fiber plastic extrusion coat.
- 19. The fuel injector as recited in Claim 14, wherein the filter element includes a cupshaped filter made of a cloth material and a glass fiber plastic extrusion coat.
- 21. The fuel injector as recited in Claim 16, wherein the filter element includes a cupshaped filter made of a cloth material and a glass fiber plastic extrusion coat.
- 22. A method for installing a fuel injector for a fuel-injection system of an internal combustion engine, the fuel injector having a solenoid coil, a tubular support acting as an inner pole of the solenoid coil, and a filter element affixed on an outer contour of the tubular support, the method comprising the steps of:

producing the filter element, the filter element including a cup—shaped filter having a cloth material;

extrusion-coating the filter element with a glass fiber plastic extrusion coat; providing grooves in the outer contour of the tubular support, the tubular support including a shoulder on a discharge side of the grooves, and the shoulder extending radially outward beyond outer edges of the grooves;

mounting the filter element onto the outer contour of the tubular support;
mounting an extension sleeve on an outer contour of the filter element, an inner
diameter of the extension sleeve being slightly smaller than an outer diameter of the filter
element; and

compressing the glass fiber plastic extrusion coat of the filter element into the grooves in the outer contour of the tubular support, using mounting pressure applied by the extension sleeve.

## **EVIDENCE APPENDIX**

No evidence has been submitted pursuant to 37 C.F.R. §§1.130, 1.131, or 1.132. No other evidence has been entered by the Examiner or relied upon by Appellant in the appeal.

#### **RELATED PROCEEDINGS APPENDIX**

As indicated above in Section 2 of this Appeal Brief, "[t]here are no other prior or pending appeals, interferences or judicial proceedings known by the undersigned, or believed by the undersigned to be known to Appellant or the assignee, ROBERT BOSCH GMBH, 'which may be related to, directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal." As such, there are no "decisions rendered by a court or the Board in any proceeding identified pursuant to [37 C.F.R. § 41.37(c)(1)(ii)]" to be submitted.